**Amendments to the Claims:**

Please amend claims 35, 39, 57, 59, 60, 63, 70, 71, and 87-90 herein. Please cancel claims 6 and 68 without prejudice or disclaimer. Please add new claims 94-114. Please note that all claims currently pending and under consideration in the above-referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Previously Presented) A fire suppression system, comprising:

a gas generant formulated to pyrotechnically produce an inert gas mixture substantially free of carbon-containing gases; and

a heat management system positioned and configured to reduce a temperature of the inert gas mixture.

2. (Original) The fire suppression system of claim 1, further comprising an igniter composition in contact with the gas generant.

3. (Original) The fire suppression system of claim 2, wherein the igniter composition is formulated to produce an amount of heat sufficient to ignite the gas generant.

4. (Previously Presented) The fire suppression system of claim 1, wherein the gas generant is formulated to produce at least one gaseous combustion product and at least one solid combustion product when combusted.

5. (Original) The fire suppression system of claim 1, wherein the gas generant is formulated to produce minimal amounts of carbon monoxide, particulates, or smoke when combusted.

Claim 6 (Canceled)

7. (Original) The fire suppression system of claim 1, wherein the gas generant is formulated to produce less than 1 percent of an original weight of the gas generant in particulates or smoke.

8. (Previously Presented) The fire suppression system of claim 4, wherein substantially all of the at least one gaseous combustion product forms the inert gas mixture.

9. (Previously Presented) The fire suppression system of claim 4, wherein the at least one solid combustion product is formulated to minimize production of particulates during combustion of the gas generant.

10. (Previously Presented) The fire suppression system of claim 4, wherein the at least one solid combustion product is a slag.

11. (Original) The fire suppression system of claim 1, wherein the inert gas mixture comprises nitrogen and water.

12. (Previously Presented) The fire suppression system of claim 1, wherein the gas generant comprises an oxidizer, a fuel, and a binder.

13. (Previously Presented) The fire suppression system of claim 1, wherein the gas generant is formed into a geometry that provides a neutral burn when combusted.

14. (Previously Presented) The fire suppression system of claim 1, wherein the gas generant further comprises at least one of an oxidizing agent, an ignition enhancer, a ballistic modifier, a slag enhancing agent, a cooling agent, and a binder.

15. (Original) The fire suppression system of claim 1, wherein the gas generant comprises hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

16. (Original) The fire suppression system of claim 1, wherein the gas generant comprises hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

Claim 17 (Canceled)

18. (Original) The fire suppression system of claim 1, wherein the heat management system comprises a heat sink.

19. (Original) The fire suppression system of claim 1, wherein the heat management system comprises a phase change material.

20. (Original) The fire suppression system of claim 19, wherein the phase change material comprises lithium nitrate, sodium nitrate, potassium nitrate, or mixtures thereof.

21. (Original) The fire suppression system of claim 19, wherein the fire suppression system is configured to transfer heat from the inert gas mixture to the phase change material.

22. (Original) The fire suppression system of claim 1, wherein the fire suppression system is configured to disperse the inert gas mixture therefrom within from approximately 20 seconds to approximately 60 seconds after ignition of the gas generant.

23. (Original) The fire suppression system of claim 1, further comprising at least one diffuser plate to disperse the inert gas mixture.

24. (Original) The fire suppression system of claim 23, wherein the at least one diffuser plate is configured and positioned to diffuse the inert gas mixture into the heat management system.

25. (Original) The fire suppression system of claim 23, wherein the at least one diffuser plate is configured and positioned to disperse the inert gas mixture exiting from the fire suppression system.

26. (Previously Presented) The fire suppression system of claim 1, wherein the gas generant is configured into at least one pellet and is present in a combustion chamber and wherein the heat management system comprises an effluent train.

27. (Original) The fire suppression system of claim 26, wherein the combustion chamber comprises an igniter composition in contact with the gas generant.

28. (Original) The fire suppression system of claim 27, wherein the igniter composition is formulated and of sufficient mass to produce an amount of heat sufficient to ignite the gas generant.

29. (Withdrawn) The fire suppression system of claim 27, wherein the igniter composition comprises from approximately 15% to approximately 30% boron and from approximately 70% to approximately 85% potassium nitrate.

30. (Withdrawn) The fire suppression system of claim 27, wherein the igniter composition comprises strontium nitrate, magnesium, and an organic binder.

31. (Original) The fire suppression system of claim 27, wherein the igniter composition is formulated to produce solid combustion products when combusted.

32. (Original) The fire suppression system of claim 26, wherein the at least one pellet is formed into a shape that provides a neutral burn.

33. (Original) The fire suppression system of claim 26, wherein the at least one pellet further comprises an igniter composition.

34. (Original) The fire suppression system of claim 33, wherein the igniter composition and the gas generant are compressed together in the at least one pellet.

35. (Currently Amended) The fire suppression system of claim 26, wherein the at least one pellet has a total mass sufficient to produce an amount of the inert gas mixture sufficient to extinguish ~~the~~ a fire.

36. (Original) The fire suppression system of claim 26, wherein the gas generant is formulated to produce minimal amounts of carbon monoxide, particulates, or smoke when combusted.

37. (Original) The fire suppression system of claim 26, wherein the gas generant is formulated to produce less than an Immediately Harmful to Life or Health concentration of ammonia, carbon monoxide, carbon dioxide, or nitrogen oxides and less than 1 percent of an original weight of the gas generant in particulates or smoke.

38. (Original) The fire suppression system of claim 26, wherein the gas generant is formulated to produce at least one gaseous combustion product and at least one solid combustion product when combusted.

39. (Currently Amended) The fire suppression system of claim 38, wherein substantially all of the at least one gaseous combustion ~~products form~~ product forms the inert gas mixture.

40. (Original) The fire suppression system of claim 38, wherein the at least one solid combustion product is formulated to minimize production of particulates during combustion of the gas generant.

41. (Original) The fire suppression system of claim 38, wherein the at least one solid combustion product produced by combustion of the gas generant is a slag.

42. (Original) The fire suppression system of claim 41, wherein the slag is present on a surface of the at least one pellet.

43. (Original) The fire suppression system of claim 26, wherein the inert gas mixture comprises nitrogen and water.

44. (Previously Presented) The fire suppression system of claim 26, wherein the gas generant comprises an oxidizer, a fuel, and a binder.

45. (Original) The fire suppression system of claim 26, wherein the gas generant further comprises at least one of an oxidizing agent, an ignition enhancer, a ballistic modifier, a slag enhancing agent, a cooling agent, or a binder.

46. (Original) The fire suppression system of claim 26, wherein the gas generant comprises hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

47. (Original) The fire suppression system of claim 26, wherein the gas generant comprises hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

48. (Original) The fire suppression system of claim 26, wherein the heat management system is configured to reduce the temperature of the inert gas mixture.

49. (Original) The fire suppression system of claim 26, wherein the heat management system comprises a heat sink.

50. (Original) The fire suppression system of claim 26, wherein the heat management system comprises a phase change material.

51. (Original) The fire suppression system of claim 50, wherein the phase change material comprises lithium nitrate, sodium nitrate, potassium nitrate, or mixtures thereof.

52. (Original) The fire suppression system of claim 50, wherein heat from the inert gas mixture is transferred to the phase change material.

53. (Original) The fire suppression system of claim 26, wherein the fire suppression system is configured to disperse the inert gas mixture therefrom within from approximately 20 seconds to approximately 60 seconds after ignition of the gas generant.

54. (Original) The fire suppression system of claim 26, further comprising at least one diffuser plate to disperse the inert gas mixture.

55. (Original) The fire suppression system of claim 54, wherein the at least one diffuser plate is configured and positioned to diffuse the inert gas mixture into the heat management system.

56. (Original) The fire suppression system of claim 54, wherein the at least one diffuser plate is configured and positioned to disperse the inert gas mixture exiting from the fire suppression system.

57. (Currently Amended) A method for fighting a fire in a space, comprising:
igniting a gas generant to produce an inert gas mixture ~~that comprises~~ substantially free of carbon-containing gases and comprising minimal amounts of ~~carbon monoxide, particulates, or smoke~~ particulates or smoke when combusted; and
introducing the inert gas mixture into a space to extinguish a fire.

58. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises pyrotechnically igniting the gas generant to produce the inert gas mixture.

59. (Currently Amended) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture ~~comprising minimal amounts of carbon monoxide, particulates, or smoke~~ substantially free of carbon-containing gases comprises igniting the gas generant to produce nitrogen and water.

60. (Currently Amended) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises igniting a nonazide gas generant composition ~~that produces~~ to produce gaseous combustion products and solid combustion products.

61. (Previously Presented) The method of claim 60, wherein igniting a gas generant to produce an inert gas mixture comprises forming the inert gas mixture with substantially all of the gaseous combustion products produced by the gas generant.

62. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises generating gaseous combustion products within from approximately 20 seconds to approximately 60 seconds after ignition of the gas generant.

63. (Currently Amended) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing gaseous combustion products that are

substantially free of ~~carbon-containing gases or~~ nitrogen oxides.

64. (Original) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing a neutral burn of the gas generant.

65. (Original) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises igniting an igniter composition to produce sufficient heat to ignite the gas generant.

66. (Previously Presented) The method of claim 65, wherein igniting an igniter composition comprises igniting an igniter composition comprising from approximately 15% to approximately 30% boron and from approximately 70% to approximately 85% potassium nitrate.

67. (Previously Presented) The method of claim 65, wherein igniting an igniter composition comprises igniting the igniter composition comprising strontium nitrate, magnesium, and an organic binder.

Claim 68 (Canceled)

69. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing solid combustion products that minimize the particulates and the smoke formed by the gas generant.

70. (Currently Amended) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises igniting the gas generant ~~that comprises~~comprising hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

71. (Currently Amended) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises igniting the gas generant ~~that comprises~~comprising hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

72. (Original) The method of claim 57, wherein introducing the inert gas mixture into a space comprises dispersing the inert gas mixture into the space within from approximately 20 seconds to approximately 60 seconds after ignition of the gas generant.

73. (Original) The method of claim 57, further comprising reducing a temperature of the inert gas mixture after combustion of the gas generant.

74. (Original) The method of claim 73, wherein reducing a temperature of the inert gas mixture after combustion of the gas generant comprises exposing the inert gas mixture to a heat management system.

75. (Original) The method of claim 74, wherein exposing the inert gas mixture to a heat management system comprises flowing the inert gas mixture into a heat sink.

76. (Original) The method of claim 74, wherein exposing the inert gas mixture to a heat management system comprises flowing the inert gas mixture over a phase change material.

77. (Original) The method of claim 57, further comprising extinguishing the fire by reducing an oxygen content in the space.

78. (Original) The method of claim 77, wherein extinguishing the fire by reducing an oxygen content in the space comprises reducing the oxygen content to approximately 13% by volume.

79. (Previously Presented) The fire suppression system of claim 15, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

80. (Previously Presented) The fire suppression system of claim 15, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

81. (Previously Presented) The fire suppression system of claim 16, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

82. (Previously Presented) The fire suppression system of claim 16, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

83. (Withdrawn) The fire suppression system of claim 46, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

84. (Withdrawn) The fire suppression system of claim 46, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

85. (Withdrawn) The fire suppression system of claim 47, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

86. (Withdrawn) The fire suppression system of claim 47, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

87. (Withdrawn-currently amended) The method of claim 70, wherein igniting the gas generant ~~that comprises~~comprising hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide comprises igniting the gas generant ~~that comprises~~comprising recrystallized hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

88. (Withdrawn-currently amended) The method of claim 70, wherein igniting the gas generant ~~that comprises~~comprising hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide comprises igniting the gas generant ~~that comprises~~comprising hexa(ammine)cobalt(III)-nitrate having less than approximately 0.1% of activated charcoal or carbon, cuprous oxide, and titanium dioxide.

89. (Withdrawn-currently amended) The method of claim 71, wherein igniting the gas generant ~~that comprises~~ comprising hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide comprises igniting the gas generant ~~that comprises~~comprising recrystallized hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

90. (Withdrawn-currently amended) The method of claim 71, wherein igniting the gas generant ~~that comprises~~ comprising hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide comprises igniting the gas generant ~~that comprises~~comprising hexa(ammine)cobalt(III)-nitrate having less than approximately 0.1% of activated charcoal or carbon, cupric oxide, titanium dioxide, and polyacrylamide.

Claims 91-93 (Canceled)

94. (New) The fire suppression system of claim 1, wherein the gas generant comprises hexa(ammine)cobalt(III)nitrate and guanidine nitrate.

95. (New) The fire suppression system of claim 94, wherein the gas generant

comprises from approximately 1% to approximately 5% guanidine nitrate.

96. (New) The fire suppression system of claim 1, wherein the gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 4% by volume of carbon dioxide.

97. (New) The fire suppression system of claim 1, wherein the gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 0.12% by volume of carbon monoxide.

98. (New) The fire suppression system of claim 1, wherein the gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 100 parts per million of nitric oxide.

99. (New) The fire suppression system of claim 1, wherein the gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 20 parts per million of nitrogen dioxide.

100. (New) The fire suppression system of claim 1, wherein the gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 300 parts per million of ammonia.

101. (New) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 4% by volume of carbon dioxide.

102. (New) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 0.12% by volume of carbon monoxide.

103. (New) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 100 parts per million of nitric oxide.

104. (New) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 20 parts per million of nitrogen dioxide.

105. (New) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 300 parts per million of ammonia.

106. (New) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 1% by weight of the gas generant in particulates or smoke.

107. (New) A fire suppression system, comprising:

a gas generant formulated to pyrotechnically produce an inert gas mixture substantially free of carbon-containing gases, the gas generant comprising hexa(ammine)cobalt(III)nitrate and guanidine nitrate; and

a heat management system positioned and configured to reduce a temperature of the inert gas mixture.

108. (New) The fire suppression system of claim 107, wherein the gas generant comprises from approximately 1% to approximately 5% guanidine nitrate.

109. (New) The fire suppression system of claim 107, wherein the gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately

4% by volume of carbon dioxide.

110. (New) The fire suppression system of claim 107, wherein the gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately 0.12% by volume of carbon monoxide.

111. (New) The fire suppression system of claim 107, wherein the gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately 100 parts per million of nitric oxide.

112. (New) The fire suppression system of claim 107, wherein the gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately 20 parts per million of nitrogen dioxide.

113. (New) The fire suppression system of claim 107, wherein the gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately 300 parts per million of ammonia.

114. (New) The fire suppression system of claim 107, wherein the gas generant is formulated to produce less than 1 percent of an original weight of the gas generant in particulates or smoke.